



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,822	12/08/2005	Yasushi Yamahara	07057.0114	7406
22852	7590	12/04/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			HESS, DOUGLAS A	
		ART UNIT	PAPER NUMBER	
		3651		

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/559,822	YAMAHARA ET AL.
	Examiner	Art Unit
	Douglas A. Hess	3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 December 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-5 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 08 December 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/8/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>FR 2760732 Figs 183, & USP 4,969,548</u>
<u>COVER SHEET</u> |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the outer peripheral face" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kornylak USP 4,969,548.

See the attached marked up cover sheet of Kornylak depicting the claimed features.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by French Patent 2760732.

Art Unit: 3651

See the attached marked up copy of drawing figure 2 of FR 2760732 depicting the claimed features.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over French Patent 2760732 (as cited above) in view of Kornylak USP 3,651,911.

FR 2760732 teaches the device as cited above except for the positioning means of the elastic ring having tapered faces expanding outwardly. FR 2760732 teaches a 90 degree outward (vertical to a horizontal) face. Kornylak teaches an elastic ring having tapered faces expanding

outwardly in Figure 4. It would have been an obvious matter of design choice as to the shape of the outward face based on design characteristics which are specific to the invention at hand, and since the applicant has not taught that his tapered faces perform any inventive task or are for any particular purpose, the device of FR 2760732 in view of Kornylak meets the limitations of claim 2.

Allowable Subject Matter

9. Claims 3-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas A. Hess whose telephone number is 571-272-6915. The examiner can normally be reached on M-Thurs 5:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

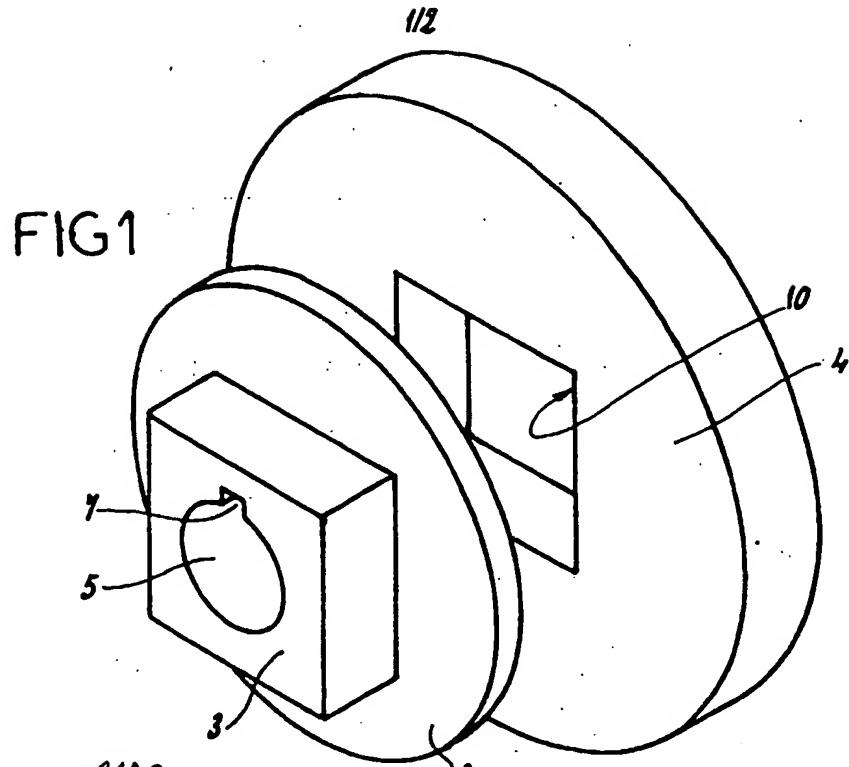
Art Unit: 3651

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



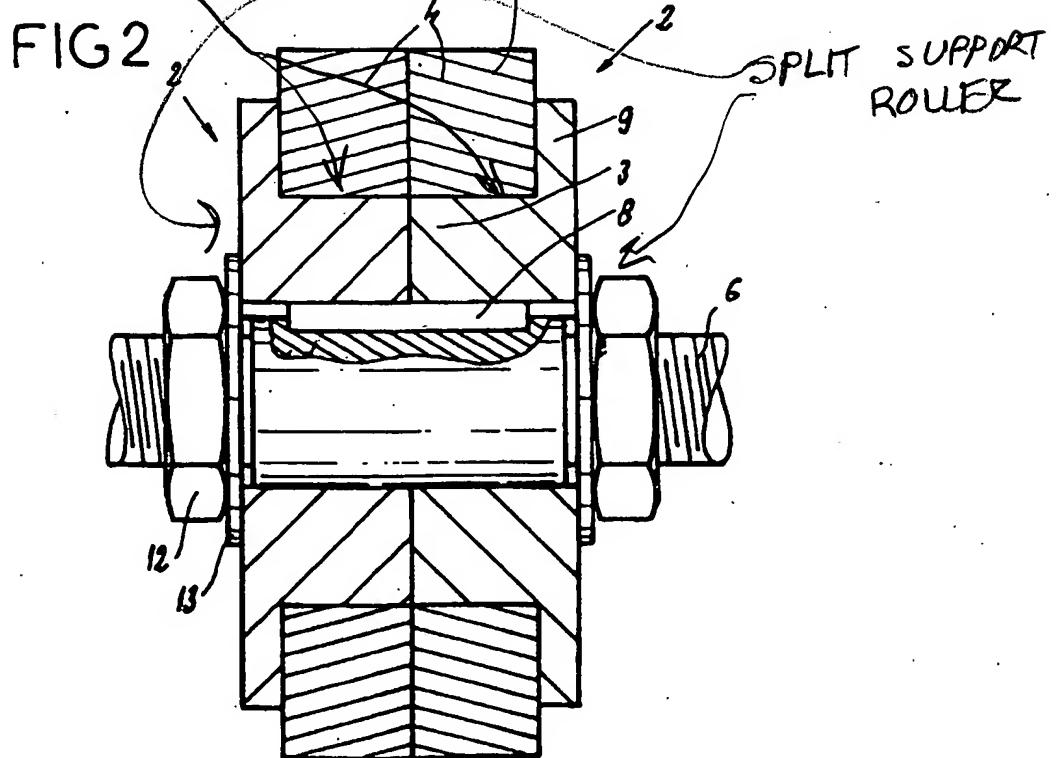
Douglas A Hess
Primary Examiner
Art Unit 3651
11/27/06

DAH
November 27, 2006



positioning means

ELASTIC RING internally fitted
to



United States Patent [19]

Kornylak

[11] Patent Number: 4,969,548

[45] Date of Patent: Nov. 13, 1990

[54] COMPRESSION SET LIMITING GRAVITY CONVEYOR

[75] Inventor: Andrew T. Kornylak, Hamilton, Ohio

[73] Assignee: Kornylak Corporation, Hamilton, Ohio

[21] Appl. No.: 187,037

[22] Filed: Apr. 27, 1988

[51] Int. Cl. B65G 13/00

[52] U.S. Cl. 193/35 R; 193/37

[58] Field of Search 193/35 R, 37; 198/780

[56] References Cited

U.S. PATENT DOCUMENTS

- 91,435 6/1869 Greene .
96,635 11/1869 Thomson .
96,636 11/1869 Tibbles .
895,621 8/1908 Fawell .
1,173,124 2/1916 Schleicher .
1,455,977 5/1923 Wentz .
1,541,410 6/1925 Cowley .
2,241,686 5/1941 Ware .
2,283,274 5/1942 Martin .
2,730,222 1/1956 Klein .
2,854,052 9/1958 Smith et al. .
2,914,811 12/1959 Cole et al. .
2,920,734 1/1960 Heinrich .
2,943,889 7/1960 Woldring et al. .
2,983,352 5/1961 De Flora et al. .
3,031,895 5/1962 Kindig .
3,053,368 9/1962 Kahn .
3,083,063 3/1963 Alfsen .
3,095,956 7/1963 McGill .
3,103,387 9/1963 Saxenberg .
3,252,556 5/1966 Isaacson .
3,275,124 9/1966 Lutes et al. .
3,374,877 3/1968 Kornylak .
3,374,878 3/1968 Kornylak .

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

- 203839 10/1956 Australia .
202436 12/1956 Australia .
288851 1/1967 Australia .
2105284 8/1971 Fed. Rep. of Germany .

15899 1/1910 United Kingdom .
1099549 1/1968 United Kingdom .
1197665 7/1970 United Kingdom .
1336761 11/1973 United Kingdom .
2023084 12/1979 United Kingdom .

OTHER PUBLICATIONS

Ball and Roller Bearings, Their Theory, Design & Application by Eschman, pp. 164, 165.

Primary Examiner—H. Grant Skaggs

Assistant Examiner—D. Glenn Dayoan

Attorney, Agent, or Firm—Fay, Sharpe, Beall, Fagan, Minnich & McKee

[57]

ABSTRACT

An undriven gravity roller conveyor is disclosed in which a first plurality of idler conveyor rollers having a rigid outer annular wheel surface and an annular tire of an elastomeric material with an inner annular bearing surface of complementary shape, mounted on each rigid outer annular wheel surface, are arranged in successive rows for conveying loads of cargo. The elastomeric tires, as mounted on the wheel surfaces, have substantially equal radial thicknesses providing outer annular bearing surfaces with a first radial dimension and a first circumferential surface area, and are made of a material having an elastic limit by which each of the tires acquires a permanent deformation known as compression set when radially depressed. Support structure having rigid outer annular bearing surfaces concentric with and rotatable about corresponding axes of rotation with the elastomeric tires, have rigid outer annular bearing surfaces characterized by a second and lesser radial dimension and a second circumferential surface area not less than one-half of the first circumferential surface area, receive and directly engage concurrently with one or more of the tires disposed about the corresponding axes a load being simultaneously supported and conveyed by one or more of the tires before the elastomeric material is subjected to an amount of radial deformation which will result in an undesirable amount of compression set.

Annular Elastic Ring

19 Claims, 7 Drawing Sheets

